

Jurassic pain: Giant 'flea-like' insects plagued dinosaurs 165 million years ago

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(Phys.org) -- It takes a gutsy insect to sneak up on a huge dinosaur while

it sleeps, crawl onto its soft underbelly and give it a bite that might have felt like a needle going in – but giant “flea-like” animals, possibly the oldest of their type ever discovered, probably did just that.

And a few actually lived through the experience, based on the discovery by Chinese scientists of remarkable fossils of these creatures, just announced in *Current Biology*, a professional journal.

These flea-like animals, similar but not identical to modern fleas, were probably 10 times the size of a flea you might find crawling on the family dog – with an extra-painful bite to match.

“These were insects much larger than modern fleas and from the size of their proboscis we can tell they would have been mean,” said George Poinar, Jr., a professor emeritus of zoology at Oregon State University, who wrote a commentary on this find in the same journal.

“You wouldn’t talk much about the good old days if you got bit by this insect,” Poinar said. “It would have felt about like a hypodermic needle going in – a flea shot, if not a flu shot. We can be thankful our modern fleas are not nearly this big.”

Poinar, who is an international expert in ancient and extinct insect life forms, said it’s possible that the soft-bodied, flea-like insects found in these fossils from Inner Mongolia are the evolutionary ancestors of modern fleas, but most likely they belong to a separate and now extinct lineage.

Called *Pseudopulex jurassicus* and *Pseudopulex magnus*, they had bodies that were more flat, like a bedbug or tick, and long claws that could reach over scales on the skin of dinosaurs so they could hold onto them tightly while sucking blood. Modern fleas are more laterally compressed and have shorter antennae, and are able to move quickly through the fur

or feathers of their victims.

“These are very well-preserved fossils that give us another glimpse of life into the really distant past, the Cretaceous and Jurassic,” said Poinar, who has also studied “younger” fleas from 40-50 million years ago preserved in amber.

All true fleas are adapted to feeding on warm-blooded vertebrates, Poinar said, and today 94 percent of the 2,300 known species attack mammals, while the remainder feed on birds. But the unusual characteristics and abilities of the flea-like animals found in these fossils lead scientists to believe their prey were some of the biggest kids on the block – [dinosaurs](#) in which they could have fed on the softer skin between scales.

Modern fleas, the report noted, have done plenty of damage. Hardly a dog or cat alive has escaped their attack, and they brought mankind such diseases as bubonic plague, which has killed 75 million people.

But their bite itself, at least, didn’t feel like a needle going in, by an insect that wasn’t even afraid of a dinosaur.

Provided by Oregon State University

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